

4731.4070 LEAK TESTING, REPLACEMENT, AND OTHER MODIFICATIONS OF SEALED SOURCES.

Subpart 1. Authorized personnel.

A. The replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing of any sealed source must be performed by persons authorized to do so by the NRC or an agreement state.

B. The opening, repair, or modification of any sealed source must be performed by persons specifically authorized to do so by the NRC or an agreement state.

Subp. 2. Leak testing requirements.

A. A licensee who uses a sealed source must have the source tested for leakage at intervals not to exceed six months.

B. Leak testing of a sealed source must be performed using a method approved by the NRC or an agreement state.

C. A wipe sample must be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample must be analyzed for radioactive contamination. The analysis must be capable of detecting the presence of 0.005 microcurie (185 Bq) of radioactive material on the test sample. The analysis must be performed by a person specifically authorized by the NRC or an agreement state to perform the analysis.

D. A licensee must maintain records of the leak tests according to part 4731.4240.

E. Unless a sealed source is accompanied by a certificate from the transferor that shows that it has been leak tested within six months before the transfer, the sealed source may not be used by the licensee until tested for leakage. Sealed sources that are in storage and not in use do not require leak testing, but must be tested before use or transfer to another person if the interval of storage exceeds six months.

Subp. 3. Leaking source.

A. A test conducted under subpart 2 that reveals the presence of 0.005 microcurie (185 Bq) or more of removable radioactive material must be considered evidence that the sealed source is leaking.

B. The licensee must immediately withdraw the equipment involved from use and must have it decontaminated and repaired or disposed of according to this chapter.

C. A report must be filed with the commissioner, within five days and must include:

- (1) the model number and serial number, if assigned, of the leaking source;

- (2) the identity of the radionuclide and its estimated activity;
- (3) the results of the test;
- (4) the date of the test; and
- (5) the action taken.

Subp. 4. Depleted uranium testing.

A. An exposure device using depleted uranium shielding and an S-tube configuration must be tested for depleted uranium contamination at intervals not to exceed 12 months. The analysis must be capable of detecting the presence of 0.005 microcuries (185 Bq) of radioactive material on the test sample and must be performed by a person specifically authorized by the NRC or an agreement state to perform the analysis.

B. If testing under item A reveals the presence of 0.005 microcuries (185 Bq) or more of removable depleted uranium contamination, the exposure device must be removed from use until an evaluation of the wear on the S-tube has been made.

C. If the evaluation under item B reveals that the S-tube is worn through, the device may not be used again.

D. Depleted uranium shielded devices do not have to be tested for depleted uranium contamination while in storage and not in use.

E. Before using or transferring a depleted uranium shielded device, the device must be tested for depleted uranium contamination if the interval of storage exceeded 12 months.

F. A record of the depleted uranium leak test must be made according to part 4731.4240.

Statutory Authority: *MS s 144.1202; 144.1203*

History: *29 SR 755; 36 SR 74*

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